POE-8M

Quick Guide

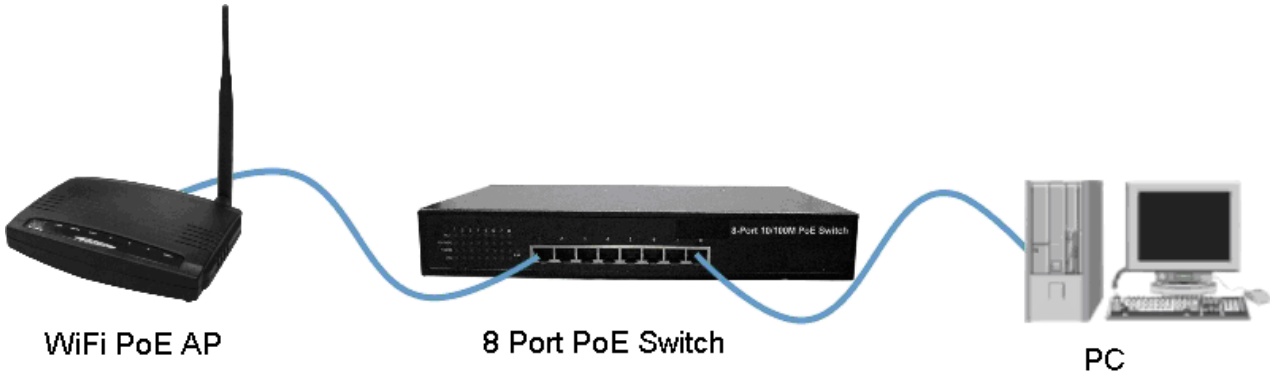
&

User's Manual

Quick Guide

Step1. Connect the PoE Switch with AC power cord to 100~240VAC.

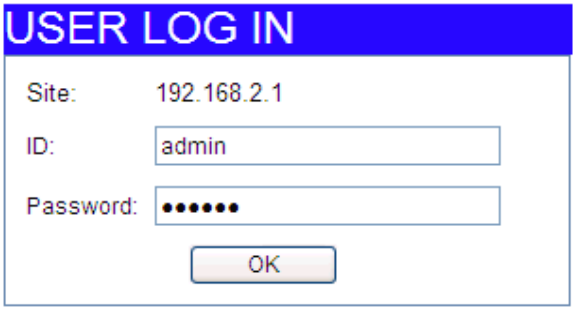
Step2. Connect the PoE AP device to LAN port 1, and your PC to LAN port 8 as the following connection.



Step3. Turn on the power switch, it will light on the PWR LED, and perform self-diagnostic test. It takes about 10 seconds to complete the process.

Step4. Set your PC IP address to **192.168.2.100** (same subnet **192.168.2.x** as the web management).

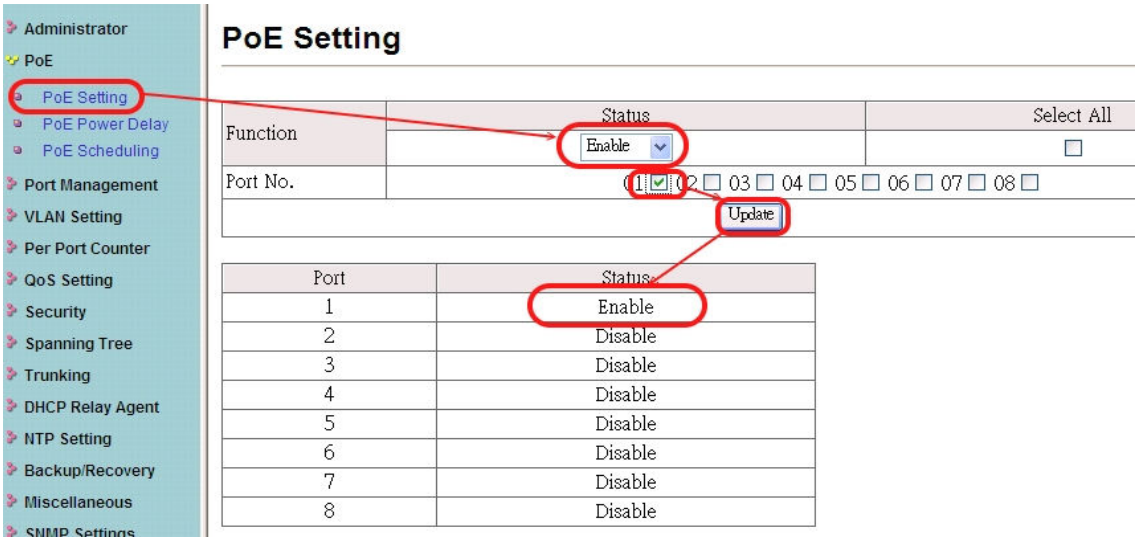
Step5. Enter "**192.168.2.1**" (default IP address of Web management) from PC web browser. The web management will display the following login page



Enter "**admin**" for user ID, "**system**" for password, and click the **OK** button to login to the Web management.
Note: the user ID and password fields are case-sensitive.

Step6. Click the icon "**PoE**", and then select "**PoE Setting**".

Step7. Select "**Enable**" and click on Port No.**1** and **Update** to power on the connected PoE AP device for Port 1. You may also click "**PoE Scheduling**" to select time schedule for Power on/off scheduling control.



Step8. Refer to Chapter 4 for further networking configurations.

**** Note:**
Problems in setting up the web smart PoE switch?
Please refer to the last chapter for troubleshooting.

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1 Introduction

The PoE Switch is an 8-Port Web-Smart Passive PoE Switch with power on/off scheduling control. The web smart features are designed to deliver high levels of performance that are commensurate with Fast Ethernet networking, and to provide simple and easy installation in an environment where the power over Ethernet (PoE) are required for remote PoE devices.

The web smart switch provide 10/100Mbps Fast Ethernet connections with many networking capabilities per port basis including Security, QoS service, Bandwidth Control, Spanning Tree Protocol, VLAN, SNMP settings, and PoE functions.

The power over the Ethernet ports are all turned off initially, and can be turned on per port basis through the web management to power on the corresponding remote PoE device. The powered PoE device can be any equipment of Passive 24V DC PoE device, such as WiFi AP, IP camera, IP Phone, etc.

Each port can deliver up to 15 Watt (Max.) to the corresponding remote PoE device. Request of more power from remote PoE device may result in a power failure due to activation of Over-Current-Protection (OCP) circuit.

The PoE Switch can be installed in a rack mount chassis where space is limited. The optional rack mount kit can be purchased separately from you local dealer for rack mount installation.

The rest of this user manual will help you to uncover most of the web smart features with step-by-step instructions illustrated on web pages.

2 Features

The PoE Switch is equipped with an 8-port RJ-45 connector for Fast Ethernet, and the corresponding LED indicators for each port. In addition, a built-in push button is provided for default reset, which is useful to reset back to the default IP address, user ID, and password. The features are as the following

- RJ45 x 8 for WAN and LAN ports with PoE capability
- Max. 15Watt per port basis
- Passive power PoE devices compatible
- Networking configurations by Web Management
- 16+1 LED Indicators: LAN, PoE (for 8 ports) + PWR (for system power)
- Built-in push button for default reset
- AC power on/off switch
- OVP, OCP, OTP protections

2.1 Power on Switch

The PoE Switch is equipped with an internal power supply to operate with 100~240 VAC, 50 ~ 60 Hz. The AC power cord connector is at the rear panel next to the power on/off switch. Turning on the power switch, it will first perform "**self-diagnostic**" test, and take about 10 seconds to complete the process.

2.2 LED Indicators

LED Status Table

LED	Status	Descriptions
PoE	ON	The PoE function is enabled.
	OFF	The PoE function is disabled.
Power	ON	System power is on.
	OFF	System power is off.
10/100M	ON	LAN Port is in connection.
	OFF	No Ethernet connection.
	Flashing	Data is transmitting or receiving

3 Switch Installations

This chapter lists the package contents, and describes the hardware and detailed procedures for installation of the web management switch. For a quick setup, please refer to the quick guide at the beginning of this manual.

3.1 Package Contents

Make sure that you have all the necessary accessories that come with your package, before you start the installation of the web management switch.

After unpacking and taking out the entire package contents, please check whether you have got the following items:

- ✓ PoE Switch Unit
- ✓ One AC Power Cord
- ✓ One CD-ROM for Quick Guide & User's Manual

If any of these above items is missing or damaged, please contact your local dealer for replacement.

3.2 Hardware Overview

Front Panel

The 8 ports of RJ-45 connector are on the front panel of the web smart switch with the corresponding LED indicators. The built-in push button for default reset is next to the PWR LED indicator, and can be easily accessed by a pencil or a ball pen.

LED Indicators:

LED indicators display the network connection and PoE status of the switch.

100BASE-TX Fast Ethernet with PoE Ports (Port 1~8):

These ports are with passive PoE capabilities, and will supply power to the connected PoE device under the control of the web management. This feature allows users to freely and safely mix legacy and PoE compatible devices on their network.

All the 8 ports support network speeds of either 10Mbps or 100Mbps, and can operate in half- and full- duplex transfer modes. These ports also support the automatic MDI/MDIX crossover detection function to provide "**plug and play**" capability.

Reset Button

The Reset button is used to reset all the setting back to the factory default values. Make sure that all the settings of the switch are taken down, or all the previous settings will be erased after pressing the "**Reset**" button.

The Rear Panel

The 3-pronged power plug is placed at the rear panel of the switch shown as below.

3.3 Preparations for Site Installation

You can mount PoE Switch either on desktop or on a 19-inch rack. If you plan to mount the switch on desktop, please choose a steady, level surface in a well-ventilated area that is free from excessive dust. In any case, the installation site chosen for your switch has to comply with the following requirements:

- The surface where you want to mount the switch must be able to sustain at least 1.5kg.
- Do not place heavy objects (more than 3kg) on top of the switch.
- The location must preferably be free from excessive dust, away from heat vent, hot-air exhaust and direct sunlight.
- The switch should not be placed near large electric motors or other strong electromagnetic sources. As a reference, the strength of the electromagnetic field on site should not exceed the (RFC) standards for IEC 801-3, Level 2(3V/M) field strength.
- The air temperature in the location should be within a range of 0 to 60°C.
- The relative humidity in the location should not exceed 90% non-condensing humidity.
- The distance between the RJ-45 port and the standard network interface should not exceed 100 meters.
- Adequate space should be allowed in front of all the ports, so that each port is easily accessible for cable connections.
- Leave at least 10cm (4 inch) of space around the switch to allow heating dissipation

Rack Mounting

The PoE Switch can be mounted on a standard size 19-inch rack, and placed in a wiring closet with other equipments.

Before you can mount the switch on the rack, first you must attach the mounting brackets on both sides of the switch with screws, and then mount it as a unit on the rack.

3.4 Desktop Installation

The PoE Switch has four rubber pads attached on each corner of its underside. These pads serve as cushioning against vibration and prevent the switch from sliding off its position. They also allow adequate ventilation space when you place the switch on top of another device.

The location you choose to install your switch and the way you configure your network may greatly affect its performance.
Do not place more than 1.5kg (6.6lbs) of weight on the top of the switch.
Leave at least 10cm of space around the switch to allow proper heating dissipation.

3.5 Cabling Requirements

For 100BASE-TX ports

The 8 RJ-45 station ports require standard Cat.5 twisted-pair UTP/STP cable for connection. When configuring within the 10/100 BASE-T cabling architecture, the cable distance should be within 100m. The cable requirement for 10/100BASE-TX connection is listed in table as follows:

10BASE-T	100 ohm Category 3, 4, 5 UTP/STP cable
100BASE-TX	100 ohm Category 5 UTP/STP cable

Auto MDI/MDI-X function

The PoE Switch is equipped with Auto-MDI/MDI-X function, which allows you to use straight-thru cable to connect another switch/hub. Simply use the straight-through cable for all types of 10/100BASE-TX connections to either a PC or other switch.

Connection / Spec.	**10 /100Base-TX**
Interface	RJ-45
Cable to Use	Standard Cat.5
To an end station	Straight-through twisted-pair cable
To a hub/switch	Straight-through twisted-pair cable
Maximum Distance	100 meters

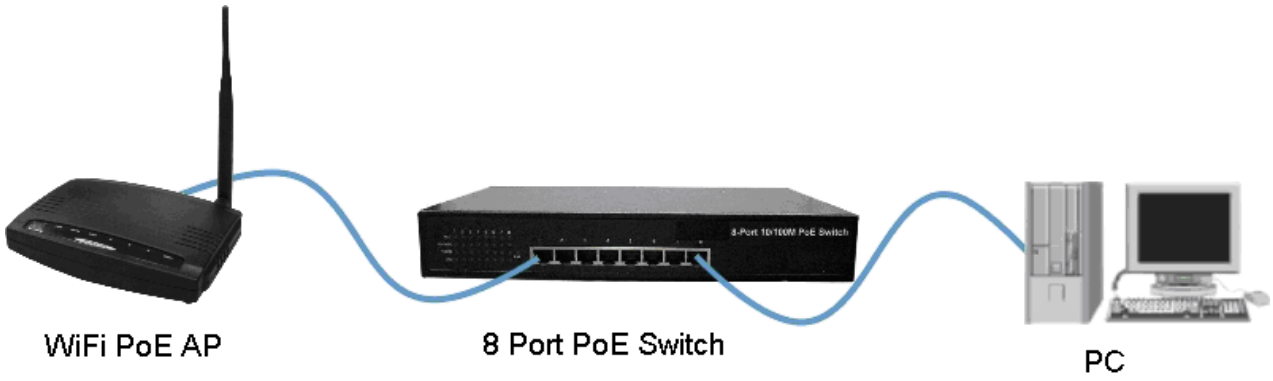
3.6 Power Connection

The PoE Switch is equipped with an internal power supply unit, which allows a power connection to a wide range of input voltages from 100 to 240 VAC with 50 ~ 60Hz.

To establish its power connection, simply plug the female end of the power cord into the power connector on the rear of the switch and the male end of the power cord into a suitable power outlet. Once you have correctly plugged in the power, you can then turn on the Power Switch to activate the switch.

3.7 Installation Steps

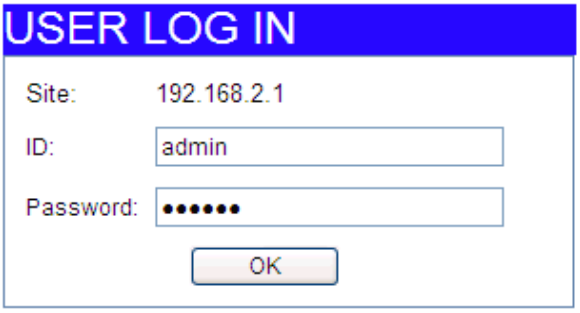
This section describes the step-by-step procedures for PoE setup.



Step1. Connect the PoE AP device to LAN port **1**, and your PC to LAN port **8** of the PoE Switch as the above connection.

Step2. Set your PC IP address to **192.168.2.100**
(This PC IP address must be in the same subnet **192.168.2.x** as the web management. Should you have problem in setting PC IP address, please refer to Section 4.1 for setting up your PC IP address.)

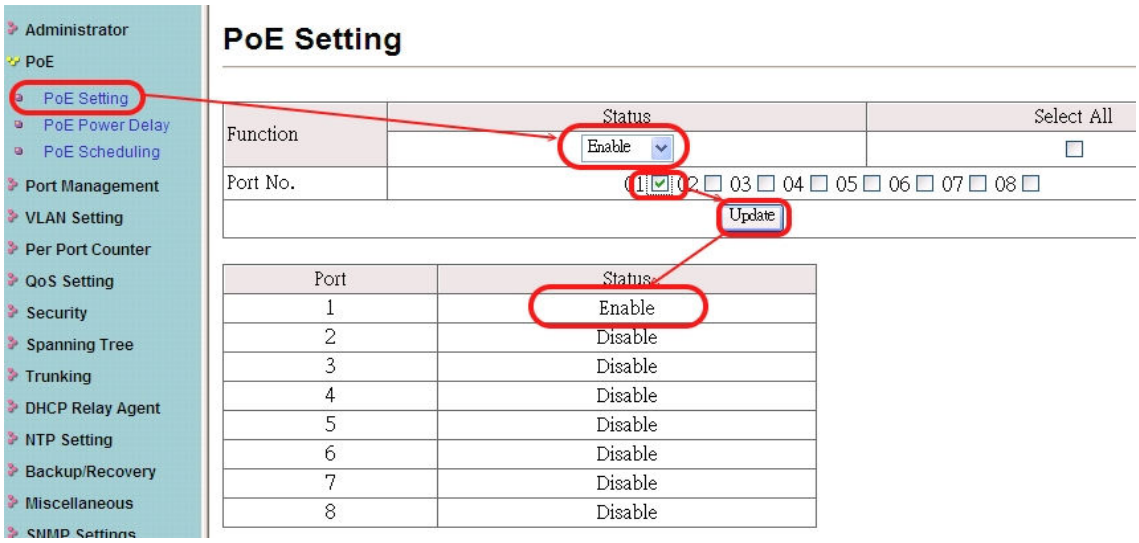
Step3. Enter "**192.168.2.1**" from PC web browser to connect to web management page as the following;



Step4. Enter "**admin**" for username and "**system**" for password.

Step5. Go to "**PoE**", and then select "**PoE Setting**".

Step6. Click on Port No.**1** and **Update** to power on the connected PoE AP device for Port 1.



Step7. Install the rack mount kit on the 19" rack if needed.

Step8. Refer to Chapter 4 for further networking configurations.

3.8 Reset to Default

When forgot the web management IP address, user ID, or password, you may use the reset button for the factory default settings. Please follow the steps to reset the Web Smart Switch back to the original default values;

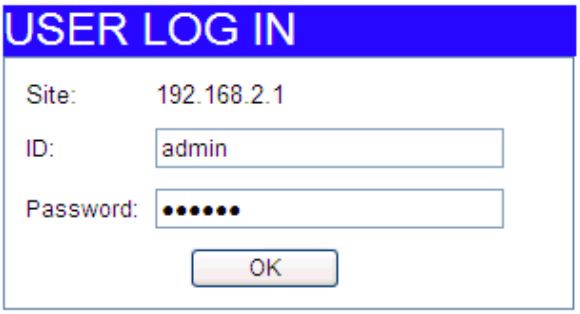
Step1. Turn on the web smart switch.

Step2. Press and hold the reset button continuously for 10 seconds and release the reset button.

Step3. The switch will reboot for 5 seconds and the configuration of switch will reset back to the default setting.

Step4. Set your PC IP address to **192.168.2.100**

Step5. Enter "**192.168.2.1**" from PC web browser to connect to web management.



Step6. Enter "**admin**" for username and "**system**" for password, and click OK button to login to web management.

4 Web Management

The PoE Switch can be configured on web page, including administrator, bandwidth management, VLAN setting, per port counter, trunk setting, QoS setting, security filter configuration, backup/recovery, miscellaneous, logout, etc. The web browsers, such as IE 6.0~7.0, Firefox 2.0~3.0, can be used to configure the web smart switch. All the web management functions will be illustrated in this chapter.

4.1 Setup your computer for Web management

The Concept of Subnet

Under the TCP/IP environment, network devices must be on the same subnet in order to connect to each other. This means that your computer must set to the same subnet and subnet mask as the switch in order to configure the switch through PC web browser.

To find out the IP address information for your computer, please run Command Line window in WinNT/2000/XP, and enter "**ipconfig**". (or enter "**winipcfg**" in Win9x).

For example, if one IP address is 192.168.2.1, and the other IP address must be 192.168.2.x (x can be any number between 2 and 254) for same Class C subnet.

For the same subnet mask, usually 255.255.255.0 is used for all Class C subnet.

Configure you computer's IP address

Before accessing the switch through web browser, please follow the instruction below to configure your computer's IP to the same subnet as the switch. If the web smart switch IP address has not been changed, it should have the following factory default value:

Default IP Address:

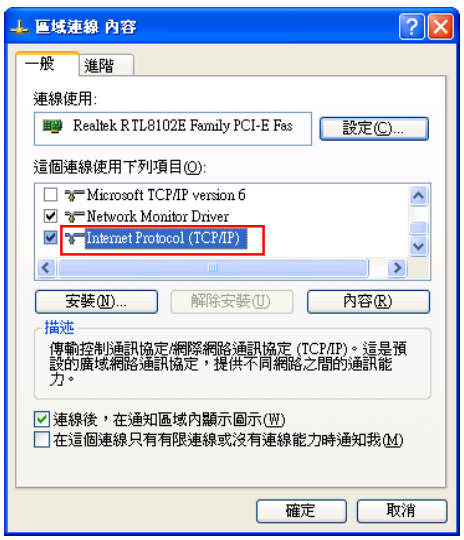
IP Address: 192.168.2.1

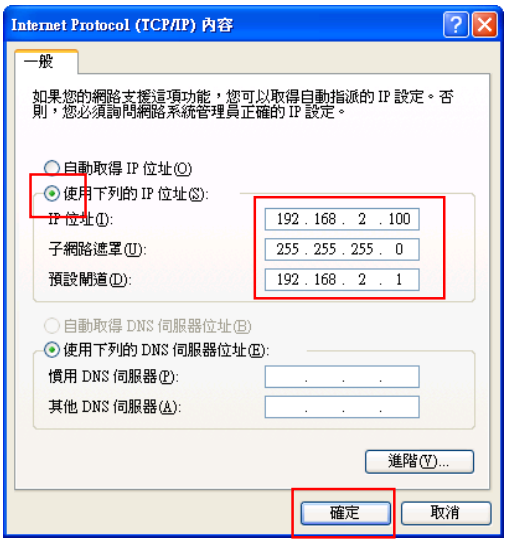
Subnet Mask: 255.255.255.0

To set your computer IP address in the same subnet as the switch, please follow the steps to change the computer IP address:

Step 1. Double click on the network connection status icon on the task bar. This should bring up a window showing the status of the current network connection. If there is no network status icon on the task bar, please go to the "**Start** -> **Settings** -> **Network** -> **Local Area Connection**" of the Window task bar's Start menu.

Step 2. Click on the "**property**" icon.





Step 3. Double click on the "**Internet Protocol (TCP/IP)**" icon.

Step 4. Click on "**Use the following IP address**" button and enter the computer's IP address manually. This IP address must be on the same subnet as the switch but different from the switch's IP. Please make sure the IP is not used by other network device. If the switch's IP address is with factory's default value, please enter the following for computer's IP:

IP Address: 192.168.2.100
Subnet Mask: 255.255.255.0
Gateway: 192.168.2.1

Click "**Ok**" after finish entering the IP.

***Note1:** An alternative configuration is to change the switch IP address into the same subnet as the computer. This can be done in the Section 4.3 Admistrator for setting new switch IP address.

***Note2:** The PoE Switch has DHCP client ability. This allows DHCP server (or router) to assign IP automatically. However, we do not recommend turning on the DHCP client because the DHCP server assign the IP randomly. The DHCP client should be used only when connecting directly to Cable Modem (for remote management) whose service provider uses DHCP for IP assignment.

Now, you will be able to access the switch by entering the switch's IP address on the web browser.

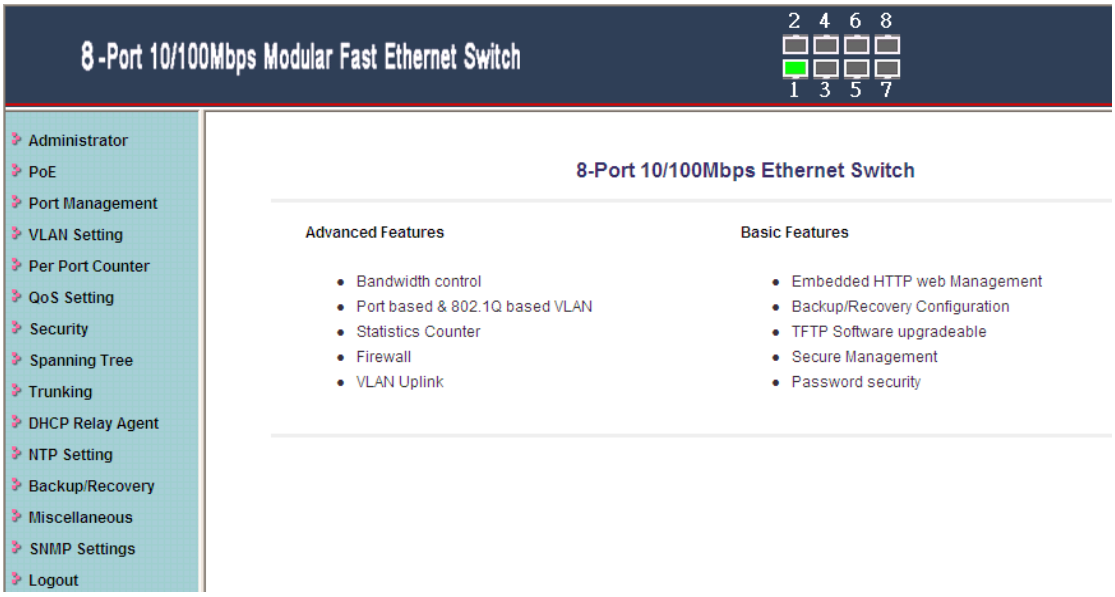
4.2 Web management

After you have properly configured the computer and switch's IP, you can get into the web management by the following steps:

Step 1. Run the Internet Explorer

Step 2. Enter "**192.168.2.1**" for the web management IP address.

Step 3. Enter "**admin**" for ID and "**system**" for password, and click the OK button to login to the web management page as follows.



Menu Bar

The Menu bar is on the left side of the screen where you may click to configure management functions. Most configurations for administration services are under the "**Administrator**" menu.

Port Connection Status

The on/off status on the top of the screen gives the quick overview of the port connection status. When a port is plugged in, the switch's image will show a "**plug**" on the corresponding port. Click on a port will show the quick port status.

4.3 Administrator

The Administrator section includes the management functions as the following:

Authentication Configuration

System IP Configuration

System Status

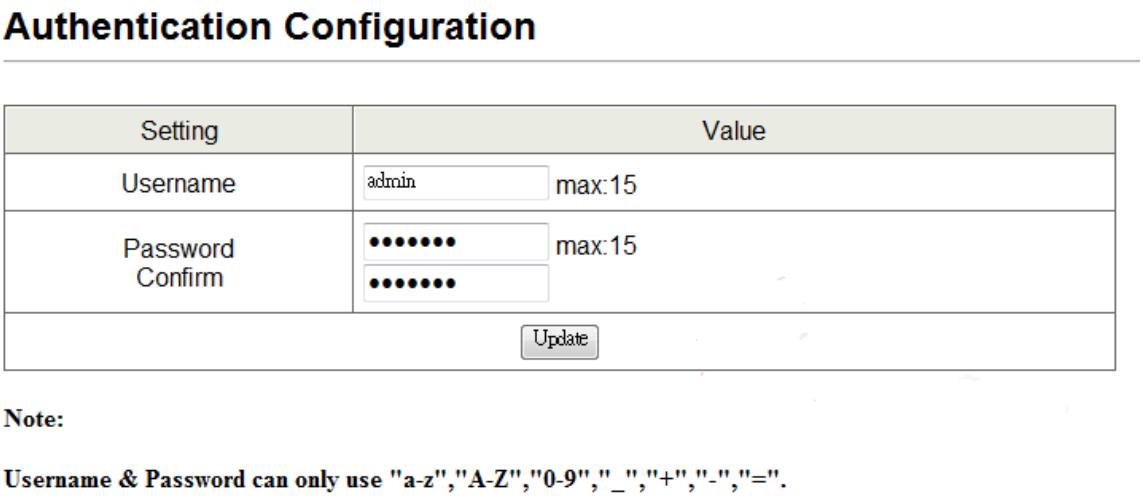
Load Default Setting

Firmware Update

Reboot Device

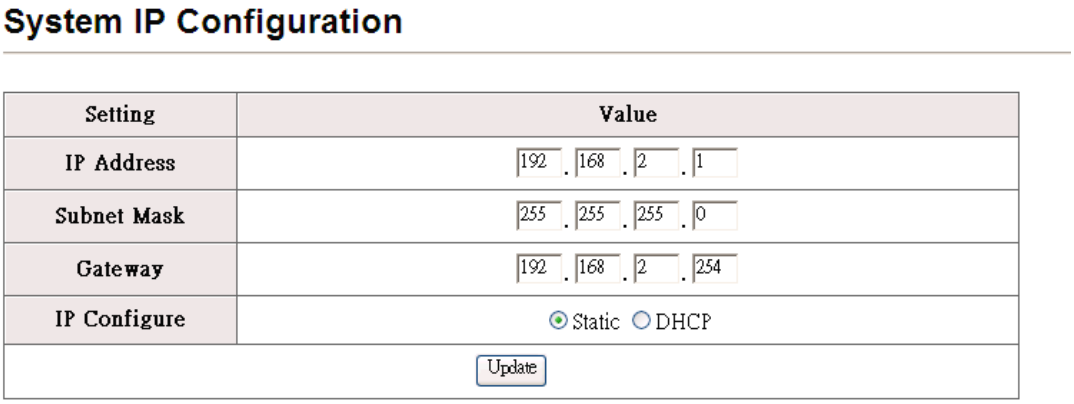
4.3.1 Authentication Configuration

This page shows the information for authentication configuration. User can set new Username and Password in this page.



4.3.2 System IP Configuration

This page shows system configuration including the current IP address, Subnet mask, and Gateway.



User can configure the IP settings, Subnet Mask, Gateway as below:

IP address: The default IP is 192.168.2.1

Subnet Mask: The default is 255.255.255.0.

Gateway: Assign the network gateway for the web smart switch.

If you change the IP address of this switch and then press Update. It will show "**update successfully**" then press Reboot button. It will enter user login screen automatically.

4.3.3 System Status

This page shows the status of switch, including MAC address and software version. The comment field allows the network administrator to input an easy-to-remember nickname for this switch.

System Status

MAC Address	00:11:45:20:13:20
Number of Ports	8
Comment	switch
System Version	Ver1.7
☐ Idle Time Security	Idle Time: 0 (1~30 Minutes) ○ Auto Logout(Default). ○ Back to the last display.
Update	

Number of Ports: Displays number of ports in the switch.
Comment: Comment note for the switch.
System Version: Displays the switch's firmware version.
Click **Update** button for exit.

4.3.4 Load Default Setting

The switch can be set to the default values by clicking the "**Load**" button.

***Note:** This will NOT change the user ID, password, and IP configurations. It only restore all default settings related to switch behavior.

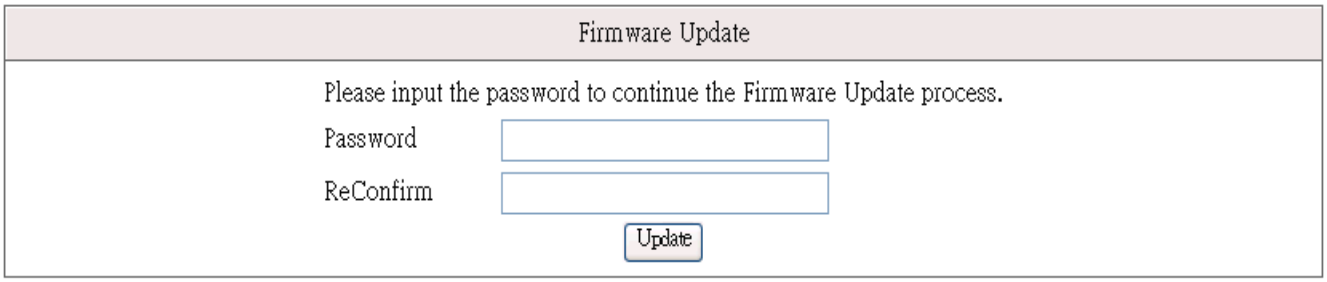
Load Default Setting

recover switch default setting excluding the IP address, User name and Password

Load

4.3.5 Firmware Update

User need to enter the password twice and press **Update** button to update the firmware. The smart switch will erase the flash memory. There is a self-protection mechanism in the boot loader, so the boot loader will keep intact. The boot loader will restore the code to firmware update page, even though the power is turned off or the cable link fails during the firmware update procedure.

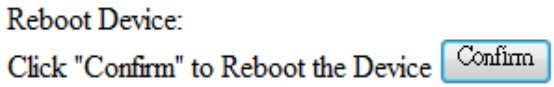


Notice:
After clicking the "UPDATE" button, if the firmware update webpage is not redirected correctly or is shown as "Webpagenot found".
Please connect to http://192.168.2.1

After pressing Update button, the old web code will be erased. Then you can select the new image file and press “**Update**” button to update the firmware you need.

4.3.6 Reboot Device

Click **“Confirm"** button to reboot the device.

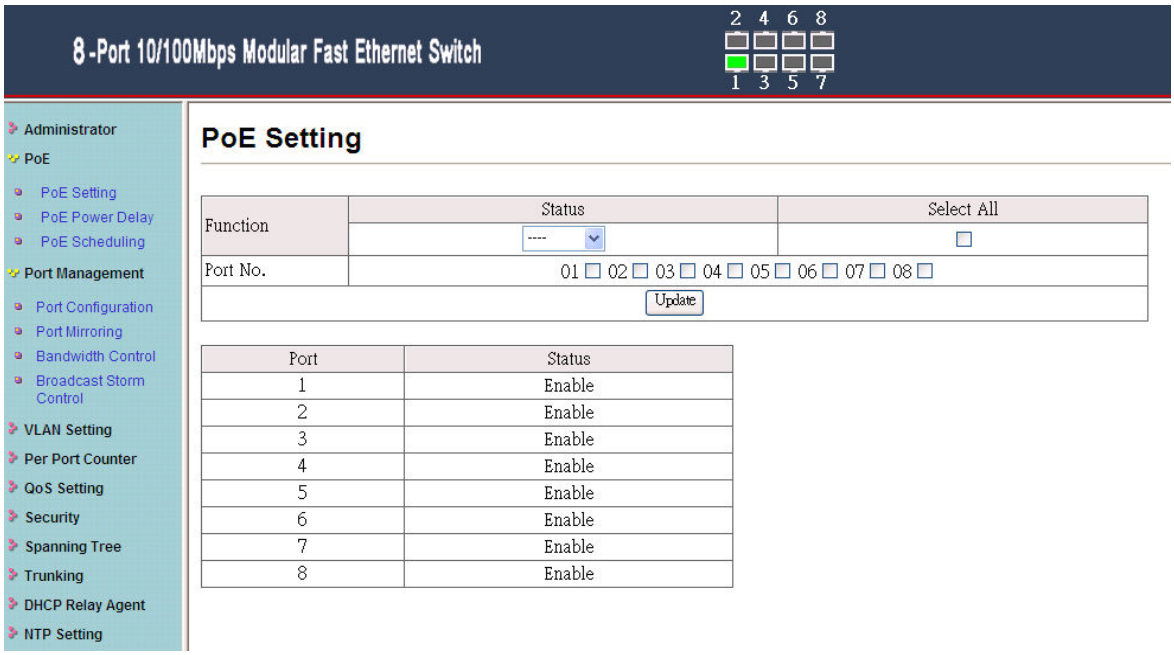


***Note:** The reboot is for software base instead of hardware base

4.4 PoE

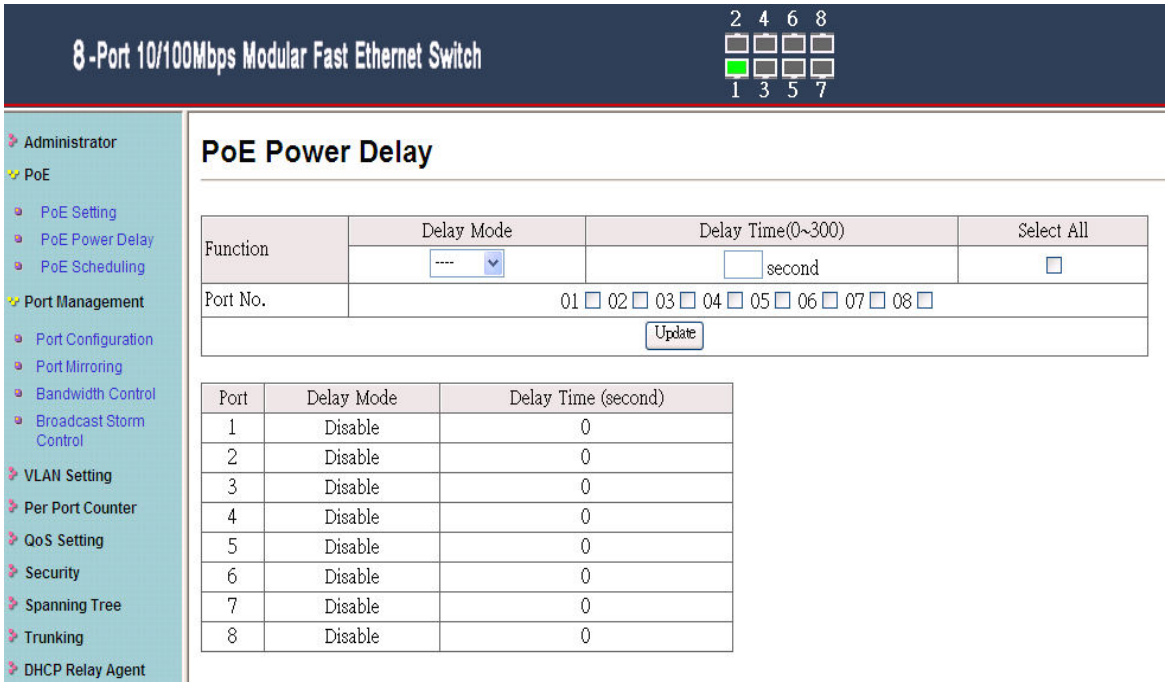
This PoE section describes the PoE functions, and display the power on/off status of each port.

4.4.1 PoE Setting



4.4.2 PoE Power Delay

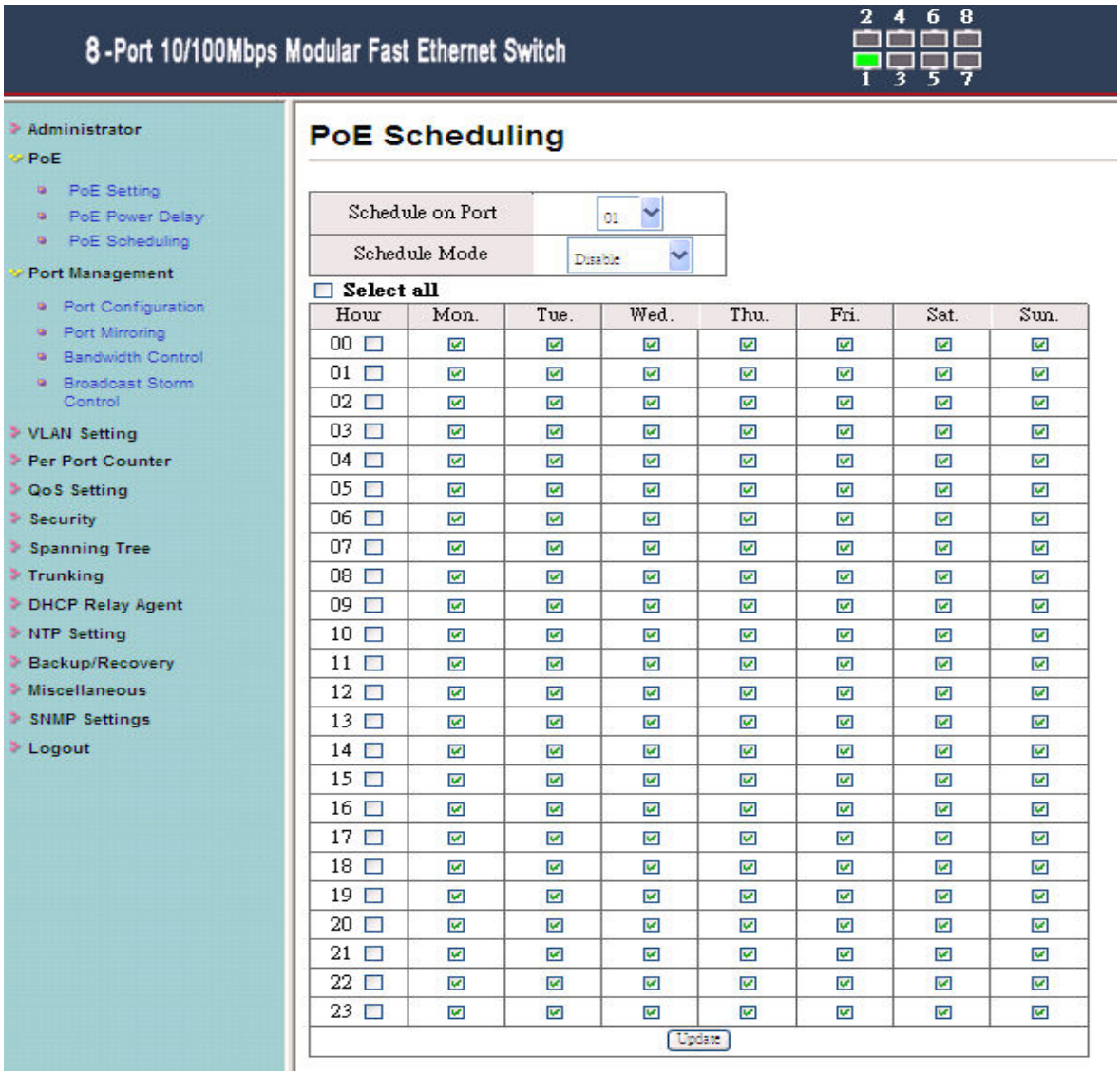
This PoE power on/off will be delayed in accord with the delay mode.



Port	Delay Mode	Delay Time (second)
1	Disable	0
2	Disable	0
3	Disable	0
4	Disable	0
5	Disable	0
6	Disable	0
7	Disable	0
8	Disable	0

4.4.3 PoE Scheduling

The PoE on/off control will be scheduling in accord with the schedule mode.

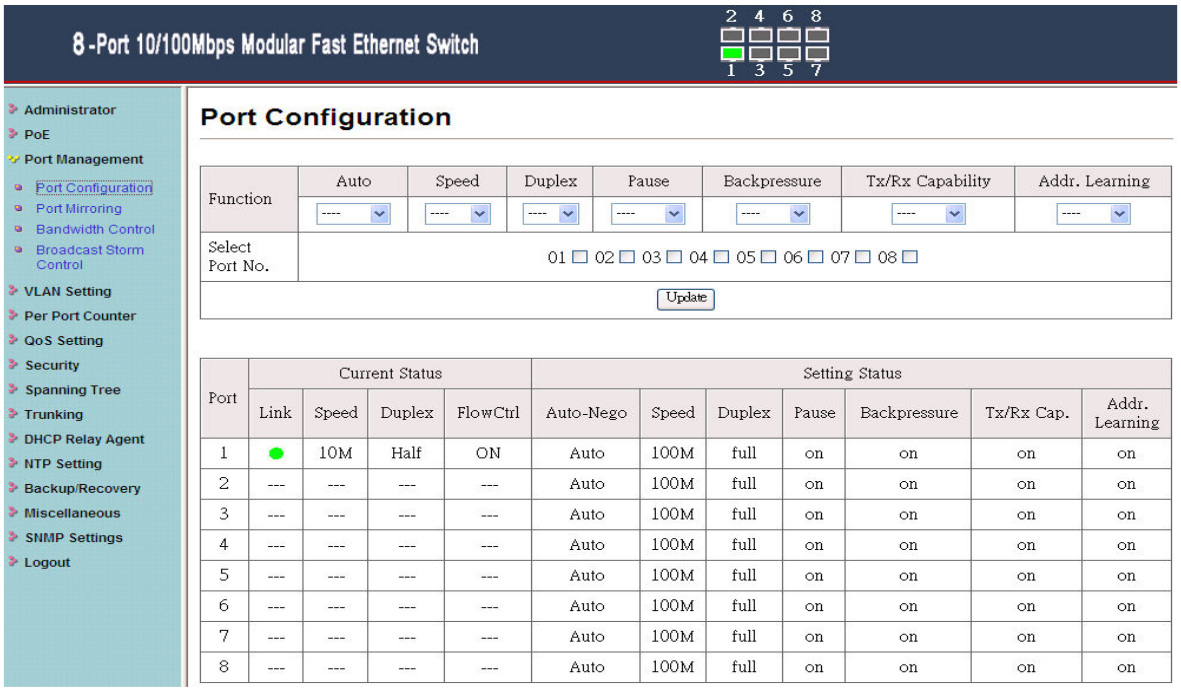


4.5 Port Management

The Port Management section includes the management functions as the following: Port Configuration, Port Mirroring, Bandwidth Control, Broadcast Storm Control.

4.5.1 Port Configuration

In Port Configuration, you can set and view the operation mode for each port.



Auto: Enable and Disable.
For '**Enable'**, the Speed, Duplex mode, Pause, Backpressure, TX Capability, and Address Learning are negotiated automatically.
For '**Disable'**, you have to assign those items manually.

Speed: When the Auto-Negotiation column is set as Disable, users have to set the connection speed to the ports ticked.

Duplex: When the Auto-Negotiation column is set as Disable, users have to set the connection mode in Half/Full to the ports ticked.

Pause: Flow Control for connection at speed of 10/100Mbps in Full-duplex mode.

Backpressure: Flow Control for connection at speed of 10/100Mbps in Half-duplex mode.

TX Capability: When the Auto-Negotiation column is set as Disable, users have to set this column as Enable or Disable.

Address Learning: When the Auto-Negotiation column is set as Disable, users have to set this column as Enable or Disable.

Select Port No.: Tick the check boxes beside the port numbers being set.

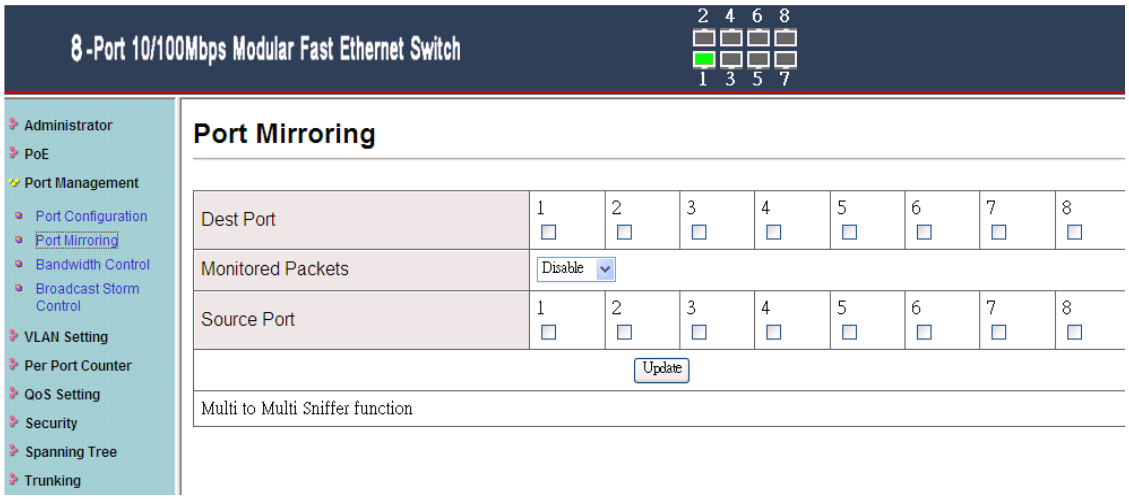
Click "**Update**" to make the configuration effective.

Current Status: Displays current port status.
Setting Status: Displays current status.

Click "**Update**" to make the configuration effective

4.5.2 Port Mirroring

The port mirroring function is accomplished by setting the following items.



Destination port: The port mirroring function will lower the network throughput, and it's recommended to set "**only one**" destination port in a network.

Monitored packets:

(1) **Disable:** means this function is disabled.

(2) **RX:** means copy the incoming packets of the selected source port to the selected destination port.

(3) **TX:** means copy the outgoing packets of the selected source port to the selected destination port.

(4) **RX & TX:** means the combination of Rx and Tx.